

# A NEW SPECIES OF *CRINIA* (ANURA: LEPTODACTYLIDAE) FROM NATIONAL PARK, NORNALUP

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At Deep River, Nornalup, in April 1961 I was being assisted by W. N. Holsworth in a search for *Metacrinia nichollsi* (Harrison) when he found a frog which was at first thought to be a juvenile *Crinia rosea* Harrison. Two further specimens were found—one proved to be adult and raised doubts as to the specific identity. In April 1962 accompanied by Arnold Kluge I revisited the Nornalup area and at the same site collected further non-breeding specimens. In October 1962 I again visited Nornalup and on this occasion I was able to collect two calling males and egg masses. The breeding males agreed with specimens previously collected, are morphologically distinct from *Crinia rosea* and are described below.

## *Crinia lutea* sp. nov.

Holotype male, W.A. Museum No. R17616. Collected National Park, Nornalup, 23. X. 62. Vomerine teeth behind choanae. Snout longer than upper eyelid, rounded, as long as distance between eyes. Canthus rostralis concave, slightly oblique. Nostrils opening equidistant between eye and snout. Fingers short  $3 > 4 > 2 > 1$ , large tubercle at base of first finger, others not prominent. Toes moderate,  $4 > 3 > 5 > 2 > 1$ , not fringed, a very small white inner metatarsal tubercle, no outer, others not prominent. Skin smooth above and below. Granular area on posterior of thigh.

Dark grey brown above, marked as in Figure 1. Ventrally; throat



Fig. 1.—*Crinia lutea* sp. nov.; left, dorsal view of holotype; right, ventral view of same.

black, a pale border around lower jaw. Belly pale fawn-brown with faint red-brown blotches which fade in preservative. Legs black except for lower surfaces of thigh which are coloured like belly though more reddish. Length, snout to vent 19.1 mm.

Type locality: A shallow valley on left bank of Deep River on western boundary of Nornalup National Park, where the Manjimup to Denmark road enters the park. Other specimens examined; males 2, females 3, juv. 4. These specimens agree with holotype with the following exceptions: Females lack the dark throat of males. Smaller specimens have pink spots on dorsum and flanks and a pink area on anterior of forearm and adjacent ventral surface. Also the dorsal pattern is outlined in pinkish grey. The length of the first finger and toe is very variable ranging from  $\frac{1}{2}$  to  $\frac{3}{4}$  length of second finger. Some of the specimens have pale tri-radial mark extending between eyes and down snout.

This species is morphologically close to both *Crinia rosea* and *Crinia laevis* (Gunther). From the former it can be distinguished by the fawn colour of the venter, smaller size, variable first finger and toe and from the latter by the paler relatively uniform colouration of the belly, smaller size and variable but larger first finger and toe.

The calls have been heard but not recorded on tape. *Crinia lutea* has a call similar to that of *Crinia rosea* but repeated more rapidly.

Habitat: Adjacent to a small stream in a broad shallow valley floor of peaty sand. Dominant vegetation Restionaceae, *Viminaria*, *Juncus*, etc., completely matted above, light does not reach soil surface which is series of pits and hummocks of mud. Male frog calls from tunnels near top of hummocks of mud or clay (to which the species name is an allusion). A number of similar tunnels were found to contain egg masses of 25 to 30 eggs. Larvae develop in the egg capsules without entering water. Early stage larvae, collected October 23, 1962, completed development December 10, 1962. In its larval life this species resembles *Crinia rosea*. However, the eggs of the latter appear to be always in a shallow depression and not tunnels as has been observed with *Crinia lutea*. *Crinia lutea* has not been heard calling or collected outside the type locality. As the distribution is at present known it is easily the most restricted of all frog species in Western Australia.

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## NOTES ON THE HERPETOFAUNA OF WESTERN AUSTRALIA

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Only two scincid lizard species belonging to the large subgroup *Heteropus* of the genus *Leiopisma* have been recorded from Western Australia (Glauert, 1961, p. 75). The distribution of this subgroup in Western Australia was thought to be confined solely to the Kimberleys and appeared to typify the western extreme of